REMARKS

This Amendment is in reply to the Office Action mailed March 20, 2003. Claims 1-27 were pending in the application. Applicant appreciates the indication of allowability for claims 24-26. Claims 1, 2, 4-13, 15, 20-22, and 27 were rejected, and claims 3, 14, 16-19, and 23 were objected to. By this response, claims 15, 16, 18, and 25 have been amended, and new claims 28 and 29 have been added. Reexamination and reconsideration of claims 1-29 are respectfully requested.

Claim 16 was objected to because of the informalities. Applicant has also amended claims 16, 18, and 25 to address the informalities that the Examiner noted. Applicant therefore requests that the objection be withdrawn.

Claim 15 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. The Applicant has amended claim 15 by changing the dependency of the claim from claim 1 to claim 14 to address this rejection. In view of the amendment, Applicant respectfully requests the rejection be withdrawn.

Claims 1, 2, 4-13, 20-22, and 27 were rejected under 35 U.S.C. 102(e) as being anticipated by Wang (U.S. Pat. 6,506,989). The Office Action contends that Wang shows all the elements of the rejected claims, of which claims 1, 20, 22, and 27 are independent claims. Applicant respectfully disagrees for the reasons set forth below.

Independent claim 1 recites a MEMS switch that includes a plurality of moving electrodes and a plurality of fixed electrodes. Each of the fixed electrodes is located interleaved with and adjacent to one of the moving electrodes. Claim 1 also recites that electrostatic forces develop between the moving and fixed electrodes causing the moving electrodes to move along an axis parallel to the plane of the substrate and perpendicular to the planar major surfaces of the electrodes. Claim 1 further recites that the contact shuttle is forced to move to the second switch state position along the axis parallel to the plane of the substrate and perpendicular to the planar major surfaces of the electrodes.

Contrary to the contention of the Office Action, Wang neither discloses nor teaches that the moving plate or the connector move along an axis perpendicular to the planar

major surfaces of the electrodes. Rather, the moving plate and the connector move along an axis parallel to the planar major surfaces of the electrodes. As shown in Fig. 2 of Wang, the comb-shaped first plate 48 of the parallel-plate capacitor is fixed to the supporting pad 40. The second plate 52, first plate 48, and flat-springs 4 are sized and shaped to facilitate opening and closing of the power circuit. In its neutral position, the electrode connector 28 is positioned away from the power circuit electrodes 12, forming an open circuit. When a driving signal is supplied to the first plate 48 and the second plate 52 (i.e., electrostatic charges of the same polarity) electrostatic force drives the second plate 52 away from the first plate 48, closing the power circuit (Wang, column 6, lines 22-32). Because Wang does not disclose or teach each and every element set forth in claim 1 of the present application, it follows that Wang does not anticipate claim 1. Applicant respectfully requests that the rejection of claim 1 and the claims that depend therefrom be withdrawn.

Independent claims 20 and 27 are also patentable for at least the same reason as claim 1. Applicant respectfully requests that the rejection of claims 20 and 27 and the claims that depend therefrom be withdrawn.

With regard to independent claim 22, it recites that a MEMS switch includes oxide insulator for electrically isolating a contact shuttle and a driven member. The Office Action contends that the switch of Wang includes "an oxide insulator 32 for electrically isolating the contact shuttle 28 and the driven member 52." In fact, the insulator 32 of Wang is a polymer insulator, rather than an oxide insulator (Wang; column 6, line 3). The oxide insulator recited in claim 22 is patentably distinct from the polymer insulator disclosed in Wang. Further, the use of the oxide offers important advantages. Particularly, the oxide electrically isolates the contact mass from the actuation structure, thereby substantially reducing stray parasitic capacitance. Wang neither teaches nor suggests that the switch includes oxide insulator for electrical isolation. Wang does not even mention oxide insulator. For at least this reason, Applicant respectfully requests that the rejection of claim 22 be withdrawn.

Applicant has added new claims 28 and 29 reciting that the contact shuttle includes a polysilicon base, a metal contact member on the base, and native oxide between

the base and metal contact member. The Office Action states that the prior art of record does not disclose or teach native oxide between the base and the metal contact member (Office Action; page 5, lines 1-3). For at least this reason, Applicant submits that claims 28 and 29 are allowable.

The other references made of record but not relied upon have also been noted. None of these references, either alone or in a combination with the other prior art of record, teaches or suggests the Applicant's invention.

CONCLUSION

In view of the above amendment and remarks, allowance of the application is respectfully solicited.

Respectfully Submitted,

TIMOTHY M. SCHAEFER

By: _____

Charles S. Ho, #51,807
FAEGRE & BENSON LLP
2200 Wells Fargo Center
90 South Seventh Street
Minneapolis, MN 55402-3901
612/766-6877

Dated: June 20, 2003

M2:20548699.01